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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/798,579

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Kazuko Shinozaki

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08/04/2009

FOLEY AND LARDNER LLP

SUITE 500

3000 K STREET NW

WASHINGTON, DC 20007

EXAMINER

KUMAR, VINOD

ART UNIT

PAPER NUMBER

1638

MAIL DATE

DELIVERY MODE

08/04/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/798,579

Applicant(s)

SHINOZAKI ET AL.

Examiner

VINOD KUMAR

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,6,9 and 11-15 is/are pending in the application.
- 4a) Of the above claim(s) 11-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,6,9,14 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date 8/12/08
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Status of objections and rejections

1. Applicant's amendment filed in the paper of 01/17/2009 is entered.
2. Claims 1, 4, 6, 9, 11 and 12-15 are pending.
3. Claims 2-3, 5, 7-8, and 10 are cancelled.
4. Claims 11-13 have been previously withdrawn from examination.
5. Claims 1, 4, 6, 9 and 14-15 are examined on merits in the present Office action.
6. Objection to claim 1 is withdrawn in light of claim amendment filed in the paper of 01/17/2009.
7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
8. Rejections of claims 4 and 9 under 35 U.S.C. 112, 1st paragraph (enablement and written description) made in the Office action of 7/17/2008 are withdrawn in light of claim amendment filed in the paper of 01/17/2009.
9. Rejection of claims 1, 4, 6, 9, 14 and 15 under 35 U.S.C. 1st paragraph (new matter under written description) made in the Office action of 7/17/2008 is withdrawn in light of claim amendment filed in the paper of 01/17/2009. However, claim amendment filed in the paper of 01/17/2009 has necessitated new rejection under 35 U.S.C. 1st paragraph (new matter) for claims 1, 4, 6, 9, 14 and 15. See item 11 of the present Office action.

Election/restriction

10. Applicants are reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or

more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

11. This application contains claims 11-13 drawn to an invention nonelected with traverse in the reply filed on August 30, 2007. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 112

12. Claims 1, 4, 6, 9 and 14-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1 and 6 recite "scions for rooting" which introduces **NEW MATTER** into amended claims. The specification does not provide written description support for the phrase "rooting efficiency of scions for rooting" or "propagation efficiency of scions for rooting". This does not comply with written description requirements. The specification fails to provide support for the full scope of instantly claimed phrase "scions for rooting". Thus, such a phrase constitutes **NEW MATTER**. In response to this rejection, Applicant is required to point to support for the phrase "scions for rooting" or to cancel the new matter.

Dependent claims 4, 9 and 14-15 are also rejected because they fail to overcome the

deficiency of parent claims.

Claim Rejections - 35 USC § 102

13. Claims 1, 4, 6, 9 and 14-15 remain rejected under 35 U.S.C. 102(b) as being anticipated by Kasuga et al. (Nature Biotechnology, vol. 17, pp. 287-291, March 1999) for the reasons of record stated in the Office action mailed on 7/17/2008. Applicant traverses the rejection in the paper filed on 01/17/2009.

Applicant continues to argue that Kasuga et al. do not teach the characteristics of improved propagation efficiency of scions, improved propagation efficiency and rooting efficiency of scions or improved propagation efficiency of scions and prolonged vase life of cut flowers. While admitting that Turnbull et al. do teach that "grafting and scions have been extensively used in *Arabidopsis*", Applicant continues to argue that Turnbull only describes grafting and not scions of *Arabidopsis*. Applicant further argues that the claimed invention requires a scion for rooting and such a characteristics cannot be an inherent property. Applicant continues to argue that *Arabidopsis* cannot be used to practice the claimed invention (response, page 6, lines 8-22; page 7, lines 1-17).

Applicant's arguments are fully considered but are deemed to be unpersuasive.

It is important to note that the characteristics "improved propagation efficiency of scions for rooting, improved propagation efficiency and rooting efficiency of scions for rooting or improved propagation efficiency of scions for rooting and prolonged vase life of cut flowers" are inherent properties of SEQ ID NO: 2 expression in the transformed plant.

In response to Applicant's argument that *Arabidopsis* cannot be used for scions and roots produced from scions, it is maintained that it was well known in the art at the time the claimed invention was made that in *Arabidopsis* use of grafting and scions, and adventitious roots produced from scions were extensively used to study long distance signaling mechanisms. For example, Applicant's attention is drawn to Turnbull et al. at page 255 (abstract), paragraph bridging pages 260 and 261, and 2nd and 3rd paragraphs of left column on page 261, wherein the reference clearly says that grafting and scions, and adventitious roots produced from scions can be studied in *Arabidopsis*. So Applicant is not on point in suggesting that Kasuga's transformed plant or a method of making said transformed plant cannot exhibit the instantly claimed characteristics.

With regard to Applicant's arguments that *Arabidopsis* is unsuitable for evaluating the vase life of cut flowers, it is important to note the following:

(a) Claims are not limited to increasing or improving prolonged vase life of cut flowers. See Markush group of claims 1 and 6.

(b) Different plant species differ in vase life due to the differences in the length of their life cycle. For example, an *Arabidopsis* plant has much shorter life cycle compared to a carnation. What may be a prolonged vase life for *Arabidopsis* (even a day, emphasis added) may not hold true for a carnation. Thus results presented in figure 1 (response of 01/17/2009) do not suggest that vase life cannot be evaluated for *Arabidopsis*.

Applicant is also reminded that when the reference relied on expressly anticipates all of the elements of the claimed invention, the reference is presumed to be operable or enabling. See *In re Sasse*, 629 F.2d 675, 207 USPQ 107 (CCPA 1980). See also MPEP § 716.07.

It must be emphasized that the claims are not limited to example 4 of their specification. It is further maintained that instantly claimed transformed plant and a method of making said plant reads on any plant species including *Arabidopsis*. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

It is, therefore, maintained that Kasuga et al. disclose a transgenic plant and a method of making said transgenic plant comprising transformation of said plant with an expression vector comprising stress-inducible rd29A promoter operably linked to drive expression of a nucleotide sequence (100% sequence identity to instant DREB1A DNA or SEQ ID NO: 1) encoding stress-inducible and the DNA binding protein of DREB1A (SEQ ID NO: 2), wherein said DREB1A protein binds to a stress-responsive element of a stress-inducible promoter in response to environmental stresses like, freezing, drought or salt. The reference further discloses a recombinant vector, stress (drought, salt or freezing) tolerant transgenic plant and a method of producing said transgenic plant comprising said stress-inducible promoter operably linked with a stress inducible coding region of *Arabidopsis* CBF3 (a DREB transcription factor). The transgenic plants exhibited increased tolerance to salt and drought (dehydration) stresses. See in particular, page 287, abstract; page 288, figures 1 and 2; page 289, figures 3-5; page 290, table 1; 1st and 2nd columns of page 290; page 291, experimental protocol. It may be emphasized that DREB1A DNA used in Kasuga et al. has 100% sequence identity to instant SEQ ID NO: 1 which encodes a protein having 100% sequence identity to instant SEQ ID NO: 2. This is also cited in Kasuga et al. (see in particular, page 287, 2nd paragraph, right column).

It is also maintained that the property of improved propagation efficiency of scions for rooting, improved propagation efficiency and rooting efficiency of scions for rooting or improved propagation efficiency of scions for rooting and prolonged vase life of cut flowers would be inherent to the method of producing a transformed plant comprising expression of DREB1A (SEQ ID NO: 2) in said plant.

It is important to note that something which is old does not become patentable upon the discovery of a new property. The discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition patentably new to the discoverer. See *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999). Thus the claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. See also *In re Best*, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977). See also MPEP § 2112.01.

Also see *In re Cruciferous Sprout Litig.*, 301 F.3d 1343, 1346-48, 64 USPQ2d 1202, 1204-05 (Fed. Cir. 2002) where a claim at issue was directed to a method of preparing a food rich in glucosinolates wherein cruciferous sprouts are harvested prior to the 2-leaf stage. The court held that the preamble phrase "rich in glucosinolates" helps define the claimed invention, as evidenced by the specification and prosecution history, and thus is a limitation of the claim (although the claim was anticipated by prior art that produced sprouts inherently "rich in glucosinolates"). Furthermore, see *Integra LifeSciences I Ltd. V. Merck KGaA* 50 USPQ2d 1846, 1850 (DC Scalif 1999), which teaches that where the prior art teaches all of

the required steps to practice the claimed method and no additional manipulation is required to produce the claimed result, then prior art anticipates the claimed invention.

Accordingly, Kasuga et al. anticipated the claimed invention.

14. Claims 1, 4, 6, 9 and 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Shinozaki et al. (US Patent Number: 6,495,742; Issued December 17, 2002).

Shinozaki et al. disclose a transgenic plant and a method of making said transgenic plant comprising transformation of said plant with an expression vector comprising stress-inducible rd29A promoter operably linked to drive expression of a nucleotide sequence (100% sequence identity to instant DREB1A DNA or SEQ ID NO: 1) encoding stress-inducible and the DNA binding protein of DREB1A (SEQ ID NO: 2), wherein said DREB1A protein binds to a stress-responsive element of a stress-inducible promoter in response to environmental stresses like, freezing, drought or salt. The reference further discloses a recombinant vector, stress (drought, salt or freezing) tolerant transgenic plant and a method of producing said transgenic plant comprising said stress-inducible promoter operably linked with a stress inducible coding region of *Arabidopsis* CBF3 (a DREB transcription factor). The transgenic plants exhibited increased tolerance to salt and drought (dehydration) stresses. The reference also discloses making transformed plants of maize, rice, tobacco or carrot expressing the DNA disclosed in the reference. See in particular, columns 1-22; claims 1-6; figures 1-6; examples 1-6

The properties of improved propagation efficiency of scions for rooting, improved propagation efficiency and rooting efficiency of scions for rooting or improved propagation efficiency of scions for rooting and prolonged vase life of cut flowers would be inherent to the

method of producing a transformed plant comprising expression of DREB1A (SEQ ID NO: 2) in said plant.

It is important to note that something which is old does not become patentable upon the discovery of a new property. The discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition patentably new to the discoverer. See *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999). Thus the claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. See also *In re Best*, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977). See also MPEP § 2112.01.

Also see *In re Cruciferous Sprout Litig.*, 301 F.3d 1343, 1346-48, 64 USPQ2d 1202, 1204-05 (Fed. Cir. 2002) where a claim at issue was directed to a method of preparing a food rich in glucosinolates wherein cruciferous sprouts are harvested prior to the 2-leaf stage. The court held that the preamble phrase "rich in glucosinolates" helps define the claimed invention, as evidenced by the specification and prosecution history, and thus is a limitation of the claim (although the claim was anticipated by prior art that produced sprouts inherently "rich in glucosinolates"). Furthermore, see *Integra LifeSciences I Ltd. V. Merck KGaA* 50 USPQ2d 1846, 1850 (DC Scalif 1999), which teaches that where the prior art teaches all of the required steps to practice the claimed method and no additional manipulation is required to produce the claimed result, then prior art anticipates the claimed invention.

Accordingly, Shinozaki et al. anticipated the claimed invention.

15. Claims 1, 4, 6, 9 and 14-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Shinozaki et al. (US Patent Number: 6,670,528; Issued December 30, 2003; filed April 28, 1999).

Shinozaki et al. disclose a transgenic plant and a method of making said transgenic plant comprising transformation of said plant with an expression vector comprising stress-inducible rd29A promoter operably linked to drive expression of a nucleotide sequence (100% sequence identity to instant DREB1A DNA or SEQ ID NO: 1) encoding stress-inducible and the DNA binding protein of DREB1A (SEQ ID NO: 2), wherein said DREB1A protein binds to a stress-responsive element of a stress-inducible promoter in response to environmental stresses like, freezing, drought or salt. The reference further discloses a recombinant vector, stress (drought, salt or freezing) tolerant transgenic plant and a method of producing said transgenic plant comprising said stress-inducible promoter operably linked with a stress inducible coding region of *Arabidopsis* CBF3 (a DREB transcription factor). The transgenic plants exhibited increased tolerance to salt and drought (dehydration) stresses. The reference also discloses making transformed plants of maize, rice, tobacco or carrot expressing the DNA disclosed in the reference. See in particular, columns 1-19; claims 1-4; figures 1-10; examples 1-5; tables 1-3.

The properties of improved propagation efficiency of scions for rooting, improved propagation efficiency and rooting efficiency of scions for rooting or improved propagation efficiency of scions for rooting and prolonged vase life of cut flowers would be inherent to the method of producing a transformed plant comprising expression of DREB1A (SEQ ID NO: 2) in said plant.

It is important to note that something which is old does not become patentable upon

the discovery of a new property. The discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition patentably new to the discoverer. See *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999). Thus the claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. See also *In re Best*, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977). See also MPEP § 2112.01.

Also see *In re Cruciferous Sprout Litig.*, 301 F.3d 1343, 1346-48, 64 USPQ2d 1202, 1204-05 (Fed. Cir. 2002) where a claim at issue was directed to a method of preparing a food rich in glucosinolates wherein cruciferous sprouts are harvested prior to the 2-leaf stage. The court held that the preamble phrase "rich in glucosinolates" helps define the claimed invention, as evidenced by the specification and prosecution history, and thus is a limitation of the claim (although the claim was anticipated by prior art that produced sprouts inherently "rich in glucosinolates"). Furthermore, see *Integra LifeSciences I Ltd. V. Merck KGaA* 50 USPQ2d 1846, 1850 (DC Scalif 1999), which teaches that where the prior art teaches all of the required steps to practice the claimed method and no additional manipulation is required to produce the claimed result, then prior art anticipates the claimed invention.

Accordingly, Shinozaki et al. anticipated the claimed invention.

Claim Rejections - 35 USC § 103

16. Claim 15 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Kasuga et al. (Nature Biotechnology, vol. 17, pp. 287-291, March 1999; Applicant's IDS) in view of

Applicant's admitted stated of the prior art, Dalton et al. (Plant Science, 132:31-43, 1998) for the reasons of record stated in the Office action mailed on 7/17/2008. Applicant traverses the rejection in the paper filed on 01/17/2009.

Applicant argues that Dalton et al. fail to compensate for the deficiencies of Kasuga et al., and thus the combined teachings of the cited art fail to render claim 15 obvious (response, page 8, lines 4-7).

Applicant's arguments are fully considered but are deemed to be unpersuasive for the reasons as discussed above.

It thus maintained that Kasuga et al. teach a transgenic plant and a method of making said transgenic plant comprising transformation of said plant with an expression vector comprising stress-inducible rd29A promoter operably linked to drive expression of a nucleotide sequence (100% sequence identity to instant DREB1A DNA or SEQ ID NO: 1) encoding stress-inducible and the DNA binding protein of DREB1A (SEQ ID NO: 2), wherein said DREB1A binds to a stress-responsive element of a stress-inducible promoter in response to environmental stresses like, freezing, drought or salt. The reference further teaches a recombinant vector, stress (drought, salt or freezing) tolerant transgenic plant and a method of producing said transgenic plant comprising said stress-inducible promoter operably linked with a stress inducible coding region of *Arabidopsis* CBF3 (a DREB transcription factor). See in particular, page 287, abstract; page 288, Figures 1 and 2; page 289, Figures 3-5; page 290, Table 1; 1st and 2nd columns of page 290; page 291, experimental protocol.

Kasuga et al. do not teach silicon carbide whisker-mediated plant transformation.

Applicant's admitted state of the prior art teaches use of silicon-carbide whisker in plant transformation. See in particular, page 32, right column.

It is thus maintained that it would have been obvious to use any method of plant transformation that were well known in the prior art as admitted by the Applicant (see page 38, 3rd paragraph) including using the cited Dalton et al. silicon-carbide whisker based plant transformation method to arrive at the claimed invention with a reasonable expectation of success.

Accordingly, it is maintained that the claimed invention as a whole is *prima facie* obvious over the combined teachings of the prior art.

17. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shinozaki et al. (US Patent Number: 6,495,742; Issued December 17, 2002) in view of Applicant's admitted stated of the prior art, Dalton et al. (Plant Science, 132:31-43, 1998).

Shinozaki et al. teach a transgenic plant and a method of making said transgenic plant comprising transformation of said plant with an expression vector comprising stress-inducible rd29A promoter operably linked to drive expression of a nucleotide sequence (100% sequence identity to instant DREB1A DNA or SEQ ID NO: 1) encoding stress-inducible and the DNA binding protein of DREB1A (SEQ ID NO: 2), wherein said DREB1A binds to a stress-responsive element of a stress-inducible promoter in response to environmental stresses like, freezing, drought or salt. The reference further teaches a recombinant vector, stress (drought, salt or freezing) tolerant transgenic plant and a method of producing said transgenic plant comprising said stress-inducible promoter operably linked with a stress inducible coding region of *Arabidopsis* CBF3 (a DREB transcription factor). See in particular, columns 1-22; claims 1-6; figures 1-6; examples 1-6

Shinozaki et al. do not teach silicon carbide whisker-mediated plant transformation.

Applicant's admitted state of the prior art teaches use of silicon-carbide whisker in plant transformation. See in particular, page 32, right column.

It would have been obvious to use any method of plant transformation that were well known in the prior art as admitted by the Applicant (see page 38, 3rd paragraph) including using the cited Dalton et al. silicon-carbide whisker based plant transformation method to arrive at the claimed invention with a reasonable expectation of success.

Accordingly, the claimed invention as a whole is prima facie obvious over the combined teachings of the prior art.

18. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shinozaki et al. (US Patent Number: 6,670,528; Issued December 30, 2003; filed April 28, 1999) in view of Applicant's admitted state of the prior art, Dalton et al. (Plant Science, 132:31-43, 1998).

Shinozaki et al. teach a transgenic plant and a method of making said transgenic plant comprising transformation of said plant with an expression vector comprising stress-inducible rd29A promoter operably linked to drive expression of a nucleotide sequence (100% sequence identity to instant DREB1A DNA or SEQ ID NO: 1) encoding stress-inducible and the DNA binding protein of DREB1A (SEQ ID NO: 2), wherein said DREB1A binds to a stress-responsive element of a stress-inducible promoter in response to environmental stresses like, freezing, drought or salt. The reference further teaches a recombinant vector, stress (drought, salt or freezing) tolerant transgenic plant and a method of producing said transgenic plant comprising said stress-inducible promoter operably linked with a stress inducible coding region of *Arabidopsis* CBF3 (a DREB transcription factor). See in particular, See in particular, columns 1-19; claims 1-4; figures 1-10; examples 1-5; tables 1-3.

Shinozaki et al. do not teach silicon carbide whisker-mediated plant transformation.

Applicant's admitted state of the prior art teaches use of silicon-carbide whisker in plant transformation. See in particular, page 32, right column.

It would have been obvious to use any method of plant transformation that were well known in the prior art as admitted by the Applicant (see page 38, 3rd paragraph) including using the cited Dalton et al. silicon-carbide whisker based plant transformation method to arrive at the claimed invention with a reasonable expectation of success.

Accordingly, the claimed invention as a whole is prima facie obvious over the combined teachings of the prior art.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

19. Claims 6 and 9 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 6,670,528 ('528 thereafter). Although the conflicting claims are not identical, they are not patentably distinct from each other because the product claimed by U.S. Patent '528 is a transformed plant comprising SEQ ID NO: 1 (100% identity to instant SEQ ID NO: 1) and encoding a DREB1A protein of SEQ ID NO: 2 (100% identity to instant SEQ ID NO: 2).

The properties of improved propagation efficiency of scions for rooting, improved propagation efficiency and rooting efficiency of scions for rooting or improved propagation efficiency of scions for rooting and prolonged vase life of cut flowers would be inherent to the expression of SEQ ID NO: 2 in the transformed plants claimed in U.S. Patent '528.

It would have been obvious and within the scope of an ordinary skill in the art to have used any stress-responsive promoter including rd29A gene promoter as taught in the specification of U.S. Patent '582 to express SEQ ID NO: 2 under the control of said rd29A promoter to arrive at the instantly claimed transformed plant with a reasonable expectation of success.

20. Claims 6 and 9 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 6 of U.S. Patent No. 6,495,742 ('742 thereafter). Although the conflicting claims are not identical, they are not patentably distinct from each other because the product claimed by U.S. Patent '742 is a transformed plant comprising a polynucleotide sequence (would encompass SEQ ID NO: 1) and encoding a DREB1A protein of SEQ ID NO: 2 (100% identity to instant SEQ ID NO: 2).

The properties of improved propagation efficiency of scions for rooting, improved propagation efficiency and rooting efficiency of scions for rooting or improved propagation

efficiency of scions for rooting and prolonged vase life of cut flowers would be inherent to the expression of SEQ ID NO: 2 in the transformed plants claimed in U.S. Patent '742.

It would have been obvious and within the scope of an ordinary skill in the art to have used any stress-responsive promoter including rd29A gene promoter as taught in the specification of U.S. Patent '742 to express SEQ ID NO: 2 under the control of said rd29A promoter to arrive at the instantly claimed transformed plant with a reasonable expectation of success.

Conclusions

21. Claims 1, 4, 6, 9 and 14-15 remain rejected.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vinod Kumar whose telephone number is (571) 272-4445. The examiner can normally be reached on 8.30 a.m. to 5.00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**/Vinod Kumar/
Examiner, Art Unit 1638**